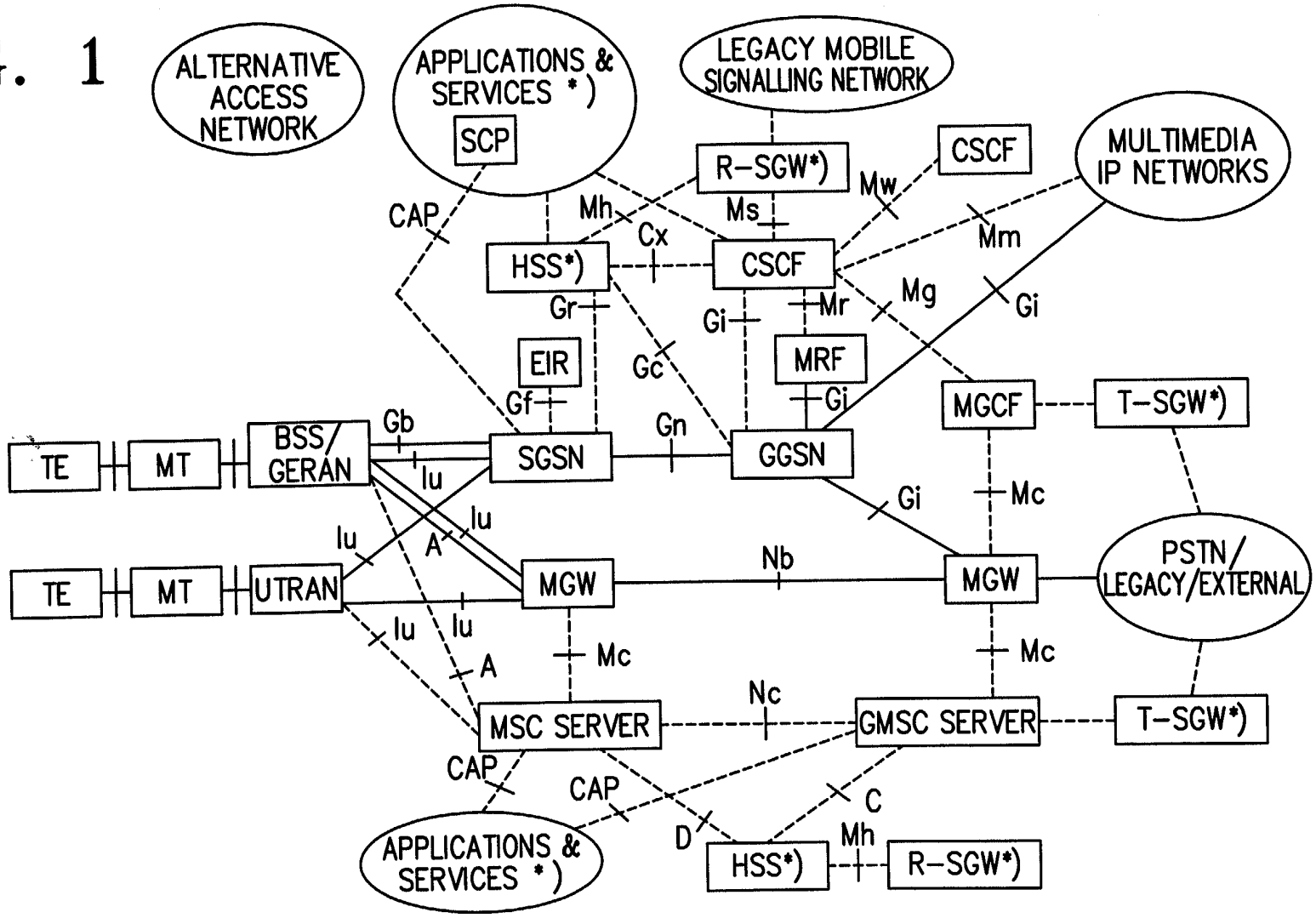
FIG. 1

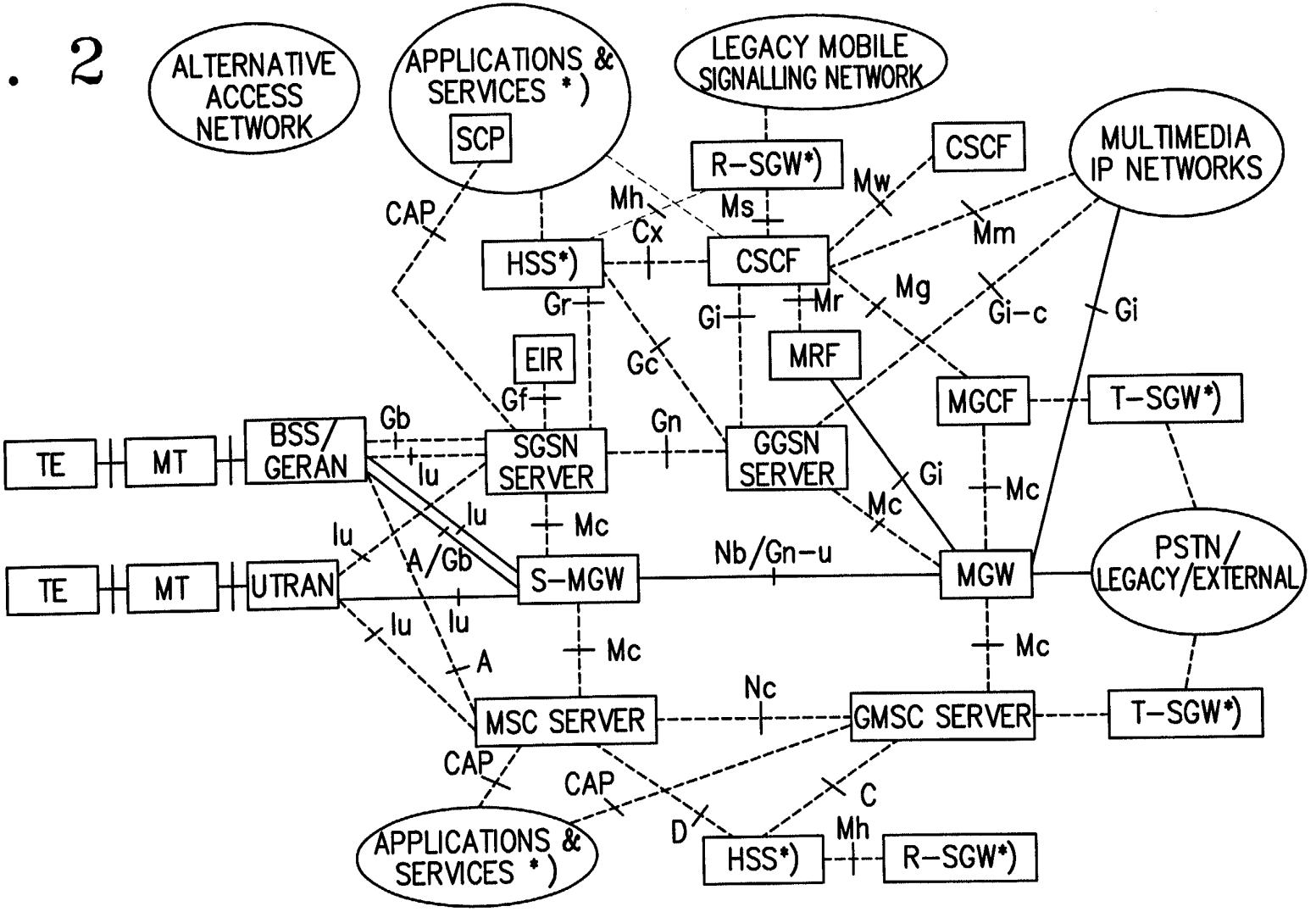


----- SIGNALLING INTERFACE

—— SIGNALLING AND DATA TRANSFER INTERFACE

*) THOSE ELEMENTS ARE DUPLICATED FOR FIGURE LAYOUT PURPOSE ONLY, THEY BELONG TO THE SAME LOGICAL ELEMENT IN THE REFERENCE MODEL

FIG. 2



----- SIGNALLING INTERFACE

—— SIGNALLING AND DATA TRANSFER INTERFACE

*) THOSE ELEMENTS ARE DUPLICATED FOR FIGURE LAYOUT PURPOSE ONLY, THEY BELONG TO THE SAME LOGICAL ELEMENT IN THE REFERENCE MODEL

FIG. 3

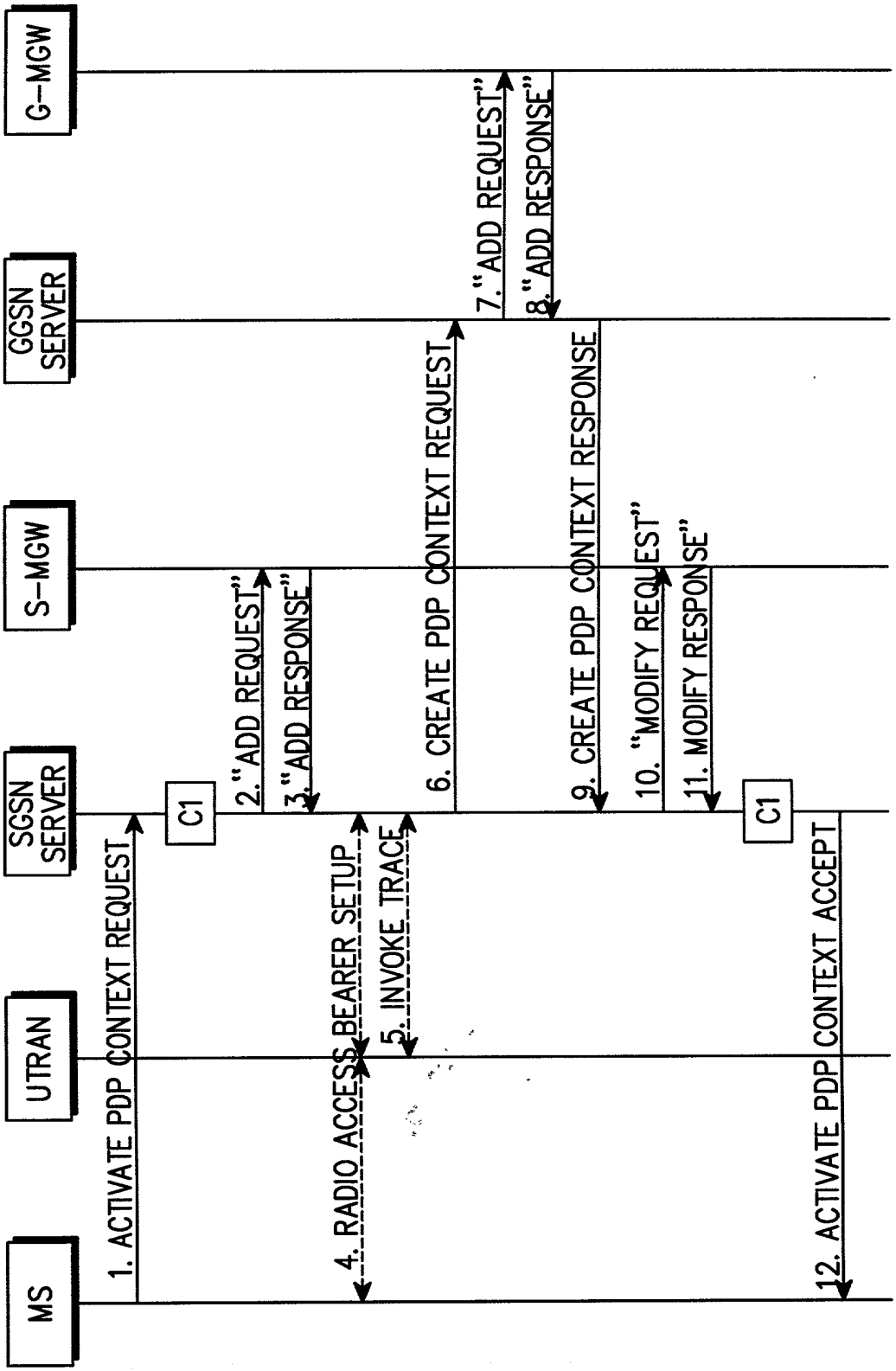
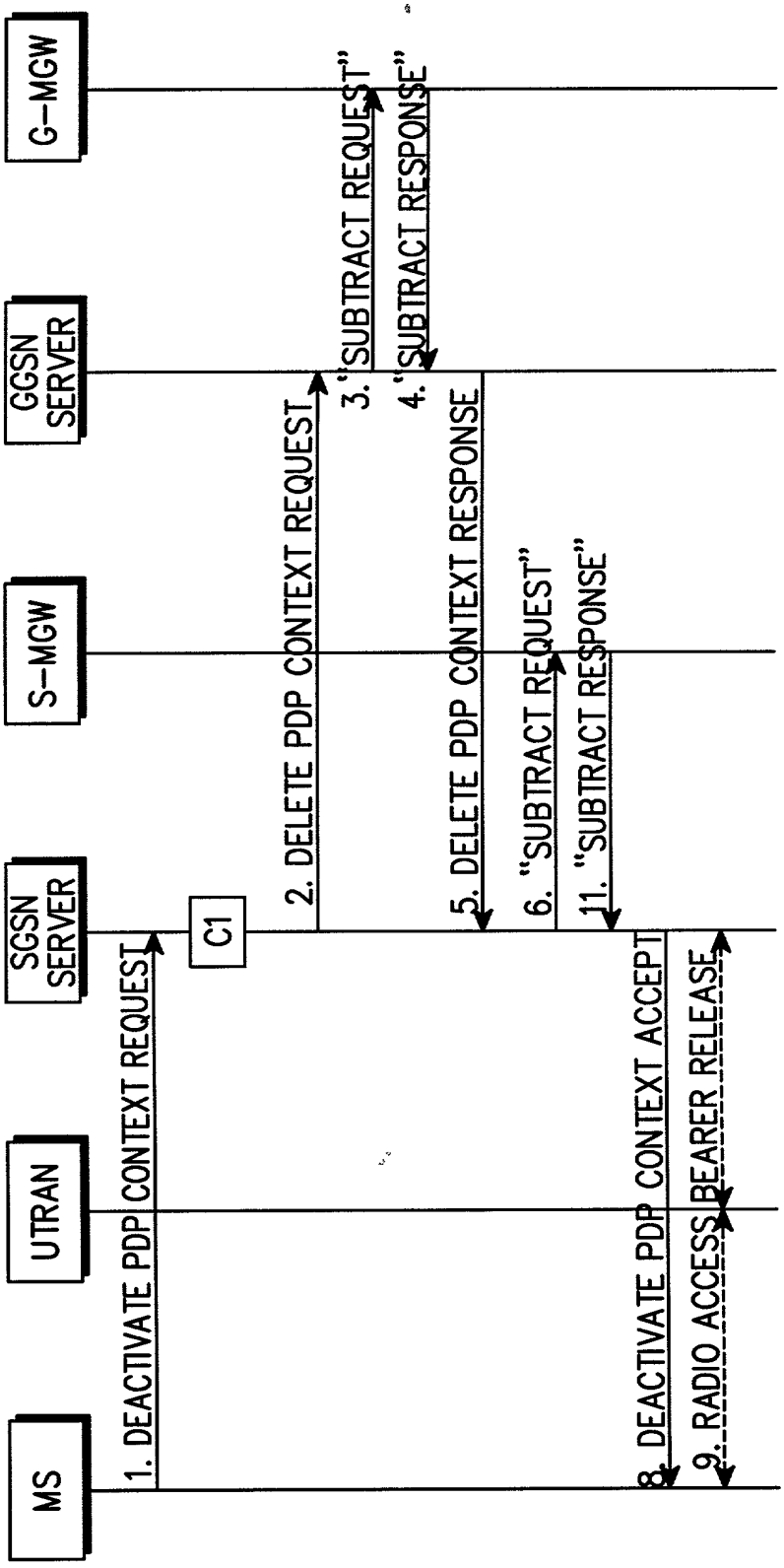

MS
UTRAN
SGSN SERVER
S-MGW
GGSN SERVER
G-MGW
1. ACTIVATE PDP CONTEXT REQUEST
C1
2. "ADD REQUEST"
3. "ADD RESPONSE"
4. RADIO ACCESS BEARER SETUP
5. INVOKE TRACE
6. CREATE PDP CONTEXT REQUEST
7. "ADD REQUEST"
8. "ADD RESPONSE"
9. CREATE PDP CONTEXT RESPONSE
10. "MODIFY REQUEST"
11. MODIFY RESPONSE
C1
12. ACTIVATE PDP CONTEXT ACCEPT

FIG. 4


MS
UTRAN
SGSN SERVER
S-MGW
GGSN SERVER
G-MGW
1. DEACTIVATE PDP CONTEXT REQUEST
C1
2. DELETE PDP CONTEXT REQUEST
3. "SUBTRACT REQUEST"
4. "SUBTRACT RESPONSE"
5. DELETE PDP CONTEXT RESPONSE
6. "SUBTRACT REQUEST"
11. "SUBTRACT RESPONSE"
8. DEACTIVATE PDP CONTEXT ACCEPT
9. RADIO ACCESS BEARER RELEASE

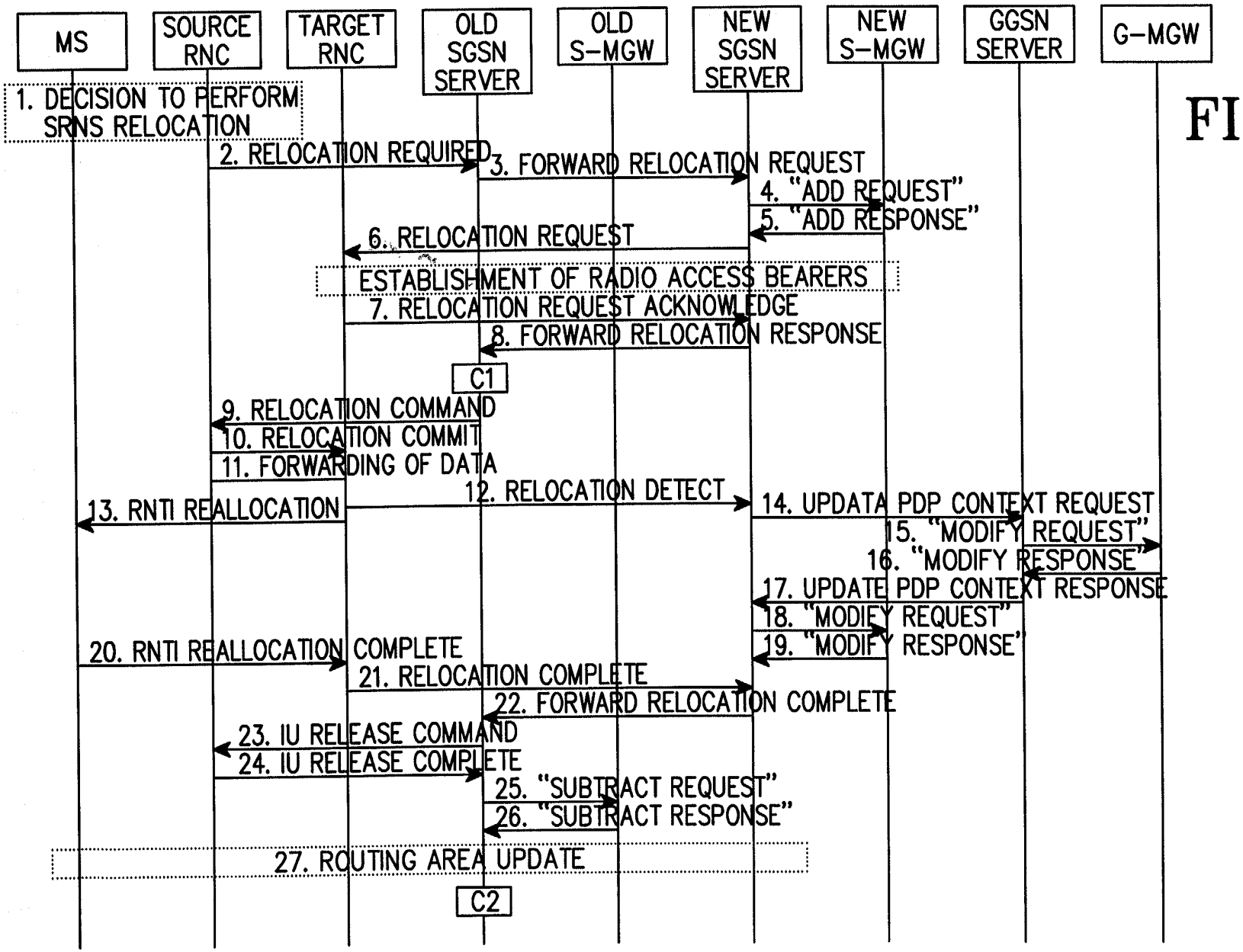
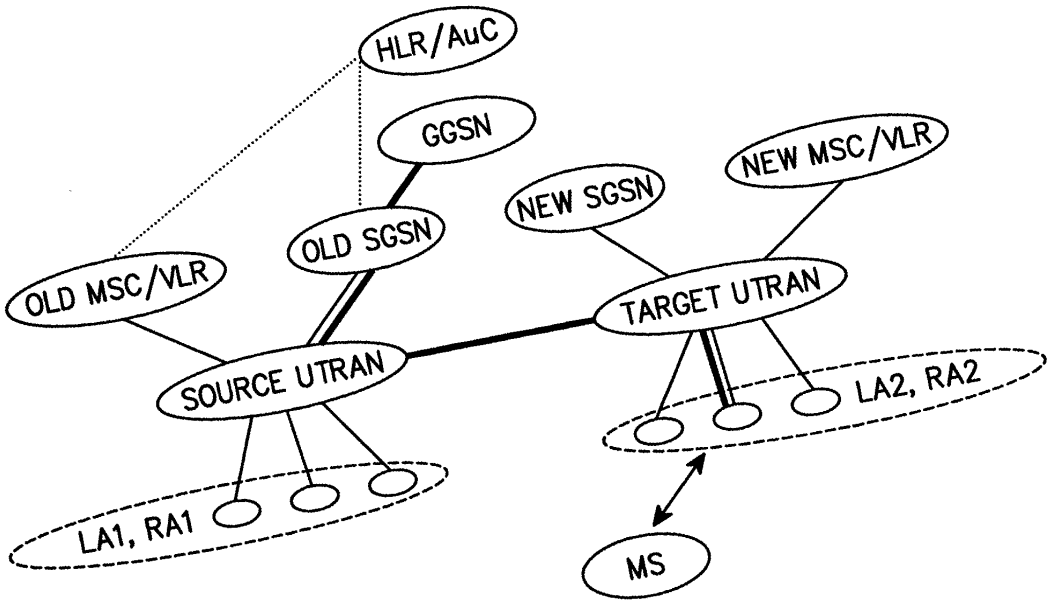

MS
SOURCE RNC
TARGET RNC
OLD SGSN SERVER
OLD S-MGW
NEW SGSN SERVER
NEW S-MGW
GGSN SERVER
G-MGW
1. DECISION TO PERFORM SRNS RELOCATION
2. RELOCATION REQUIRED
3. FORWARD RELOCATION REQUEST
4. "ADD REQUEST"
5. "ADD RESPONSE"
6. RELOCATION REQUEST
ESTABLISHMENT OF RADIO ACCESS BEARERS
7. RELOCATION REQUEST ACKNOWLEDGE
8. FORWARD RELOCATION RESPONSE
C1
9. RELOCATION COMMAND
10. RELOCATION COMMIT
11. FORWARDING OF DATA
12. RELOCATION DETECT
13. RNTI REALLOCATION
14. UPDATA PDP CONTEXT REQUEST
15. "MODIFY REQUEST"
16. "MODIFY RESPONSE"
17. UPDATE PDP CONTEXT RESPONSE
18. "MODIFY REQUEST"
19. "MODIFY RESPONSE"
20. RNTI REALLOCATION COMPLETE
21. RELOCATION COMPLETE
22. FORWARD RELOCATION COMPLETE
23. IU RELEASE COMMAND
24. IU RELEASE COMPLETE
25. "SUBTRACT REQUEST"
26. "SUBTRACT RESPONSE"
27. ROUTING AREA UPDATE
C2

FIG. 5

20040-59956660

FIG. 6



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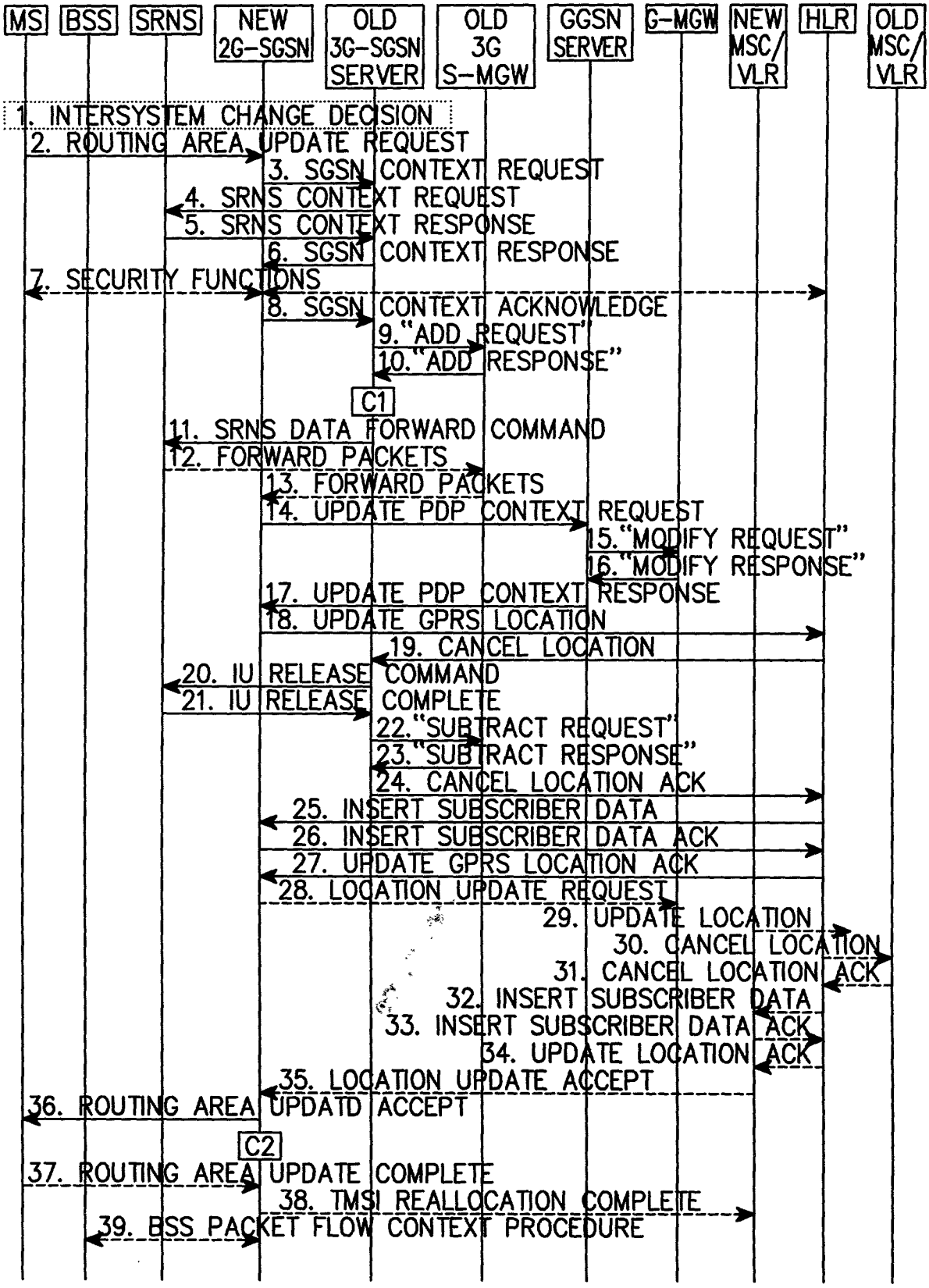
MS
BSS
SRNS
NEW 2G-SGSN
OLD 3G-SGSN SERVER
OLD 3G S-MGW
GGSN SERVER
G-MGW
NEW MSC/ VLR
HLR
OLD MSC/ VLR
1. INTERSYSTEM CHANGE DECISION
2. ROUTING AREA UPDATE REQUEST
3. SGSN CONTEXT REQUEST
4. SRNS CONTEXT REQUEST
5. SRNS CONTEXT RESPONSE
6. SGSN CONTEXT RESPONSE
7. SECURITY FUNCTIONS
8. SGSN CONTEXT ACKNOWLEDGE
9."ADD REQUEST"
10."ADD RESPONSE"
C1
11. SRNS DATA FORWARD COMMAND
12. FORWARD PACKETS
13. FORWARD PACKETS
14. UPDATE PDP CONTEXT REQUEST
15."MODIFY REQUEST"
16."MODIFY RESPONSE"
17. UPDATE PDP CONTEXT RESPONSE
18. UPDATE GPRS LOCATION
19. CANCEL LOCATION
20. IU RELEASE COMMAND
21. IU RELEASE COMPLETE
22."SUBTRACT REQUEST"
23."SUBTRACT RESPONSE"
24. CANCEL LOCATION ACK
25. INSERT SUBSCRIBER DATA
26. INSERT SUBSCRIBER DATA ACK
27. UPDATE GPRS LOCATION ACK
28. LOCATION UPDATE REQUEST
29. UPDATE LOCATION
30. CANCEL LOCATION
31. CANCEL LOCATION ACK
32. INSERT SUBSCRIBER DATA
33. INSERT SUBSCRIBER DATA ACK
34. UPDATE LOCATION ACK
35. LOCATION UPDATE ACCEPT
36. ROUTING AREA UPDATD ACCEPT
C2
37. ROUTING AREA UPDATE COMPLETE
38. TMSI REALLOCATION COMPLETE
39. BSS PACKET FLOW CONTEXT PROCEDURE

FIG. 7

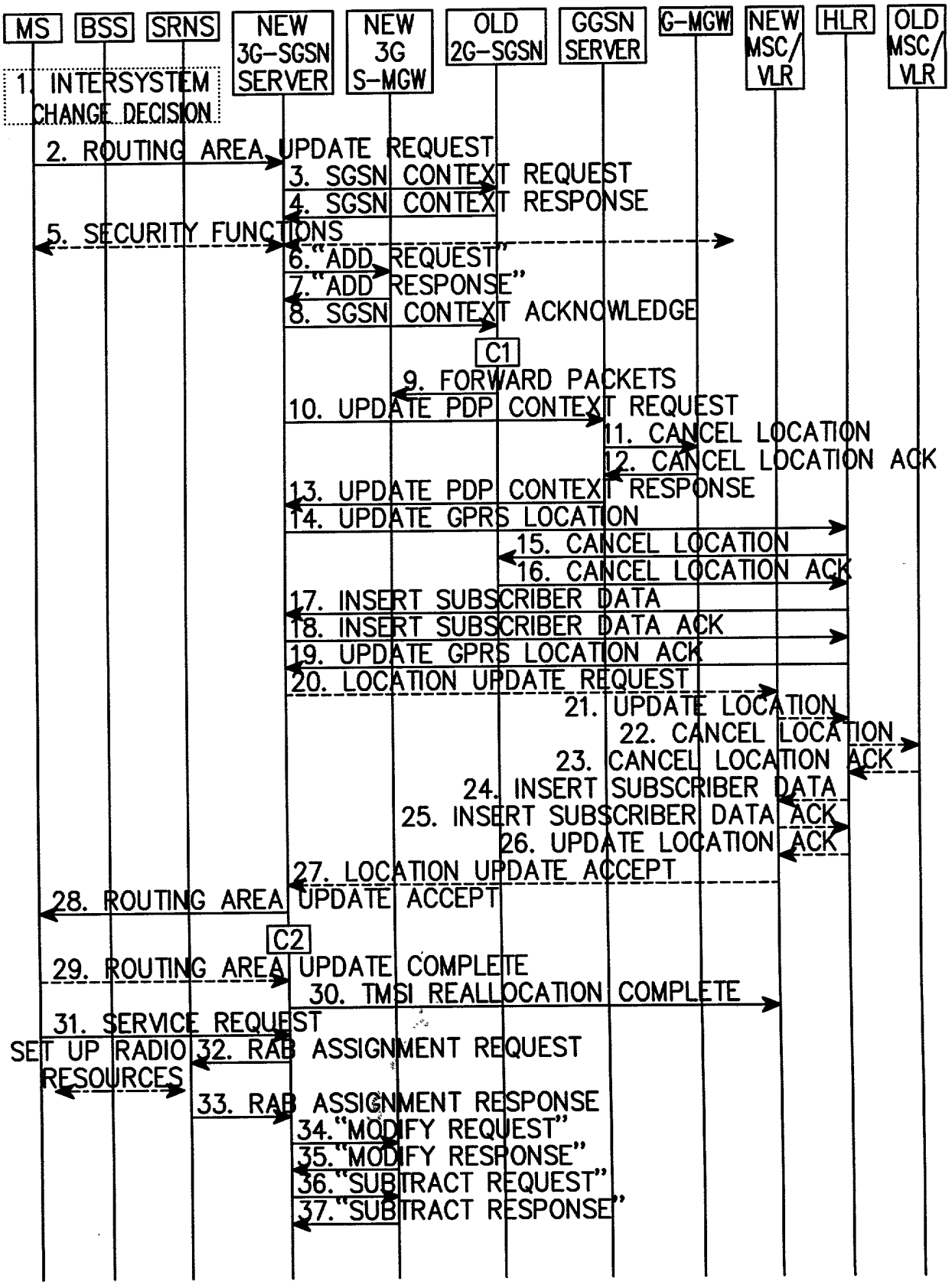
MS
BSS
SRNS
NEW 3G-SGSN SERVER
NEW 3G S-MGW
OLD 2G-SGSN
GGSN SERVER
G-MGW
NEW MSC/ VLR
HLR
OLD MSC/ VLR
1. INTERSYSTEM CHANGE DECISION
2. ROUTING AREA UPDATE REQUEST
3. SGSN CONTEXT REQUEST
4. SGSN CONTEXT RESPONSE
5. SECURITY FUNCTIONS
6."ADD REQUEST"
7."ADD RESPONSE"
8. SGSN CONTEXT ACKNOWLEDGE
C1
9. FORWARD PACKETS
10. UPDATE PDP CONTEXT REQUEST
11. CANCEL LOCATION
12. CANCEL LOCATION ACK
13. UPDATE PDP CONTEXT RESPONSE
14. UPDATE GPRS LOCATION
15. CANCEL LOCATION
16. CANCEL LOCATION ACK
17. INSERT SUBSCRIBER DATA
18. INSERT SUBSCRIBER DATA ACK
19. UPDATE GPRS LOCATION ACK
20. LOCATION UPDATE REQUEST
21. UPDATE LOCATION
22. CANCEL LOCATION
23. CANCEL LOCATION ACK
24. INSERT SUBSCRIBER DATA
25. INSERT SUBSCRIBER DATA ACK
26. UPDATE LOCATION ACK
27. LOCATION UPDATE ACCEPT
28. ROUTING AREA UPDATE ACCEPT
C2
29. ROUTING AREA UPDATE COMPLETE
30. TMSI REALLOCATION COMPLETE
31. SERVICE REQUEST
SET UP RADIO RESOURCES
32. RAB ASSIGNMENT REQUEST
33. RAB ASSIGNMENT RESPONSE
34."MODIFY REQUEST"
35."MODIFY RESPONSE"
36."SUBTRACT REQUEST"
37."SUBTRACT RESPONSE"

FIG. 8